

Environmental Controls and Life Support System (ECLSS) Design for a Space Exploration Vehicle (SEV).

Engineers at Johnson Space Center (JSC) are developing an Environmental Control and Life Support System (ECLSS) design for the Space Exploration Vehicle (SEV). The SEV will aid to expand the human exploration envelope for Geostationary Transfer Orbit (GEO), Near Earth Object (NEO), or planetary missions by using pressurized surface exploration vehicles. The SEV, formerly known as the Lunar Electric Rover (LER), will be an evolutionary design starting as a ground test prototype where technologies for various systems will be tested and evolve into a flight vehicle. This paper will discuss the current SEV ECLSS design, any work contributed toward the development of the ECLSS design, and the plan to advance the ECLSS design based on the SEV vehicle and system needs.